FIG. 1

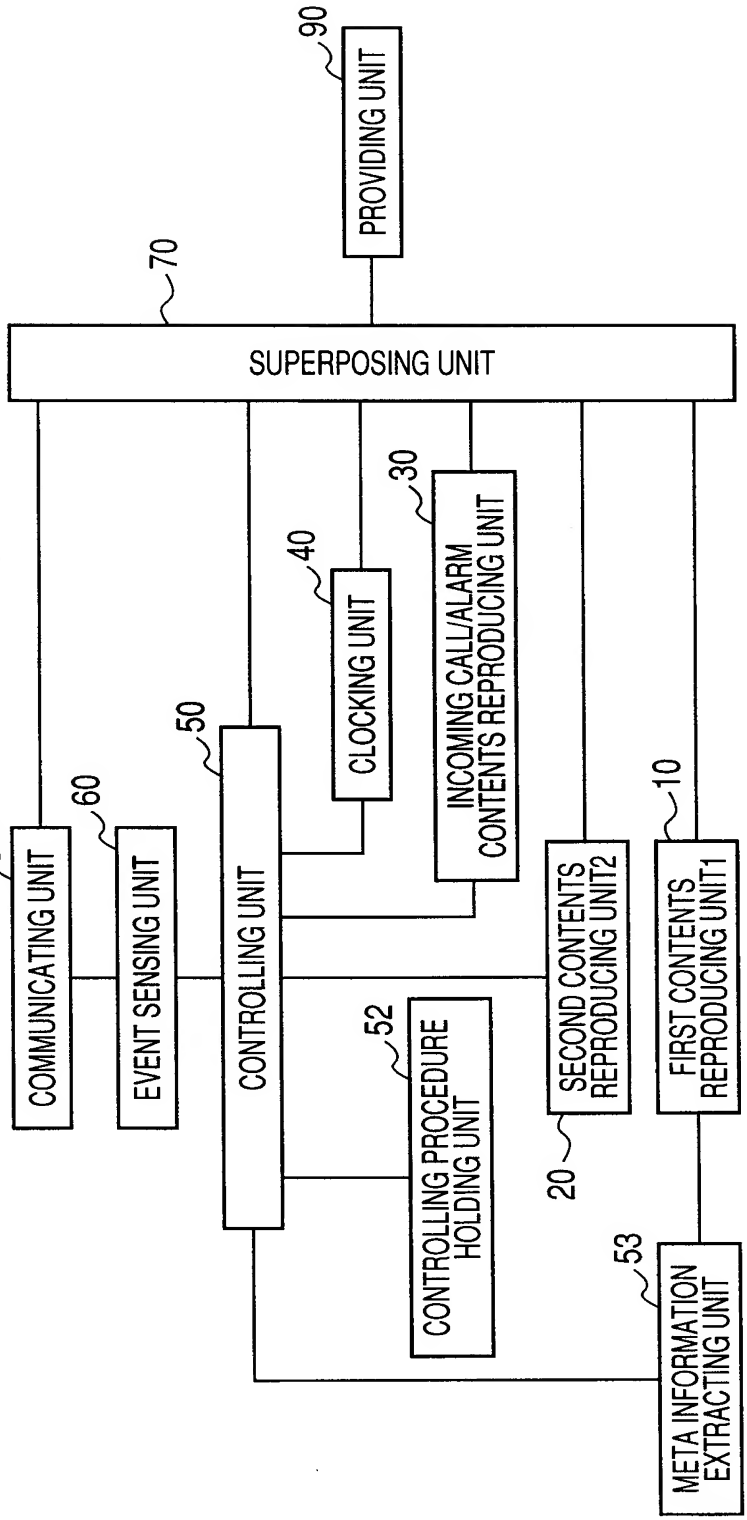

90
PROVIDING UNIT
70
SUPERPOSING UNIT
30
INCOMING CALL/ALARM CONTENTS REPRODUCING UNIT
40
CLOCKING UNIT
50
CONTROLLING UNIT
80
COMMUNICATING UNIT
60
EVENT SENSING UNIT
52
CONTROLLING PROCEDURE HOLDING UNIT
20
SECOND CONTENTS REPRODUCING UNIT2
10
FIRST CONTENTS REPRODUCING UNIT1
53
META INFORMATION EXTRACTING UNIT

FIG. 2

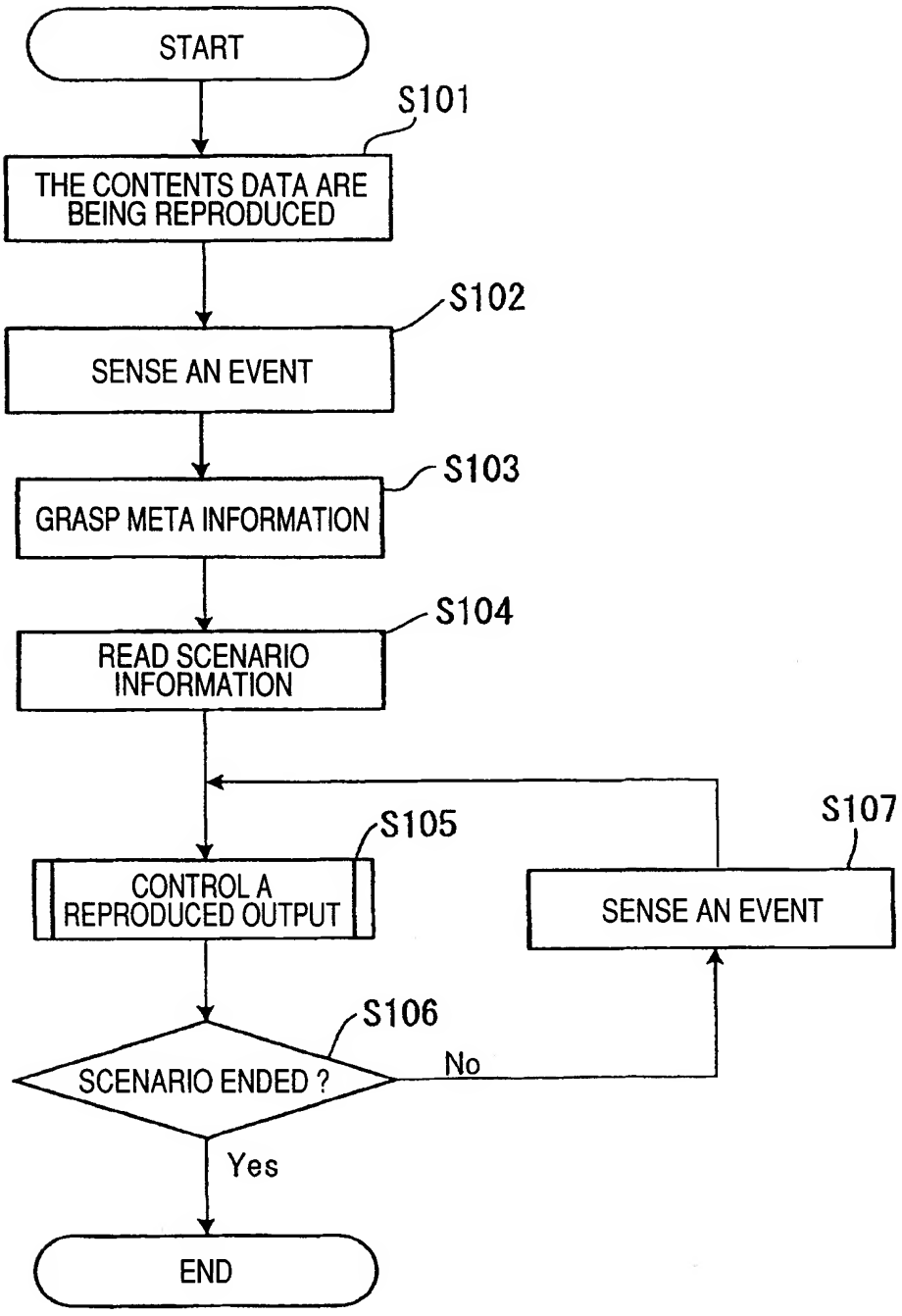

START
S101
THE CONTENTS DATA ARE BEING REPRODUCED
S102
SENSE AN EVENT
S103
GRASP META INFORMATION
S104
READ SCENARIO INFORMATION
S105
CONTROL A REPRODUCED OUTPUT
S107
SENSE AN EVENT
S106
SCENARIO ENDED ?
No
Yes
END

FIG. 3

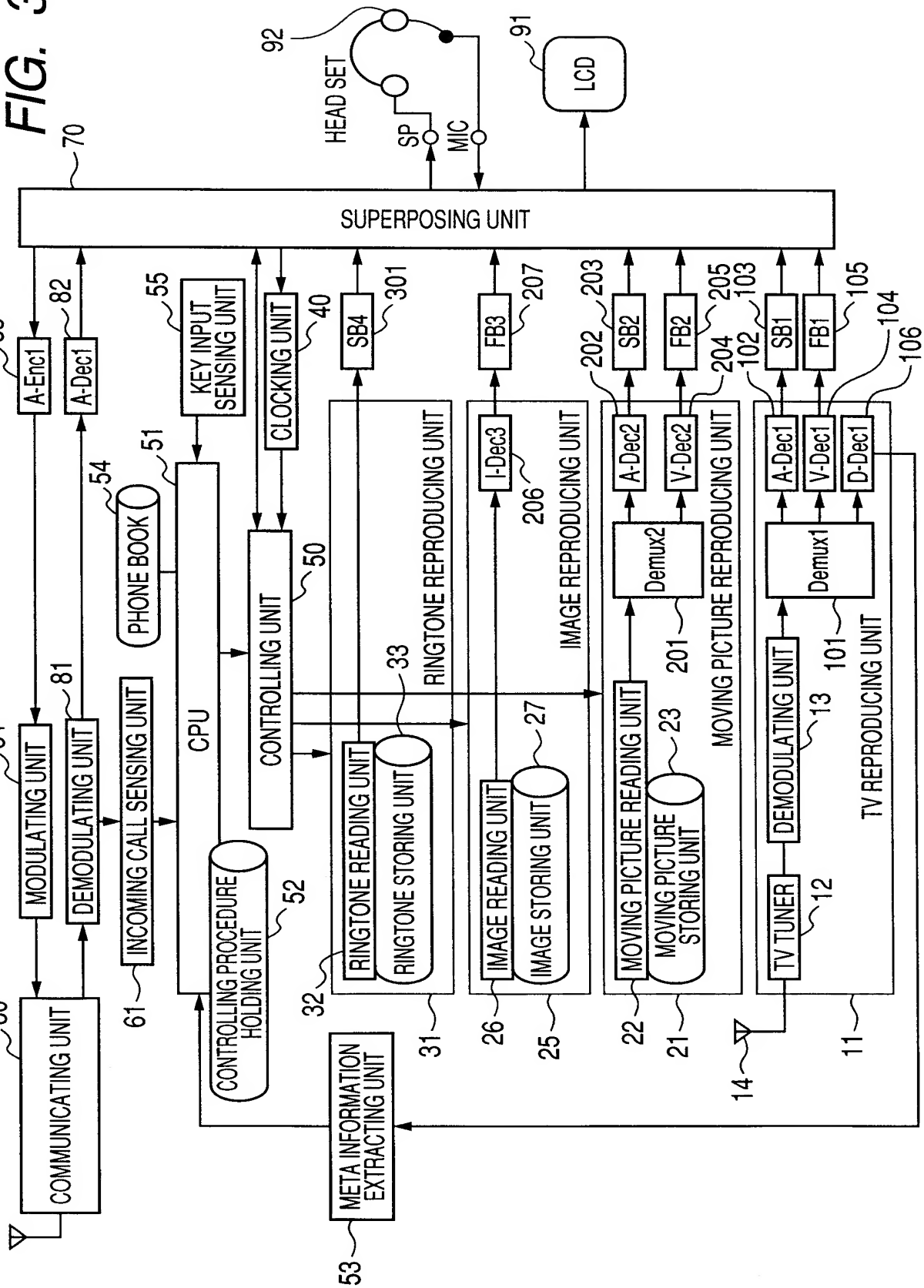

92
HEAD SET
SP
MIC
91
LCD
70
SUPERPOSING UNIT
83
A-Enc1
82
A-Dec1
55
KEY INPUT SENSING UNIT
CLOCKING UNIT
40
SB4
301
FB3
207
203
SB2
FB2
205
103
SB1
FB1
105
104
106
202
204
102
51
54
PHONE BOOK
CPU
CONTROLLING UNIT
50
I-Dec3
206
A-Dec2
V-Dec2
A-Dec1
V-Dec1
D-Dec1
84
MODULATING UNIT
81
DEMODULATING UNIT
INCOMING CALL SENSING UNIT
33
RINGTONE REPRODUCING UNIT
IMAGE REPRODUCING UNIT
Demux2
Demux1
201
101
MOVING PICTURE REPRODUCING UNIT
TV REPRODUCING UNIT
DEMODULATING UNIT
13
80
COMMUNICATING UNIT
61
CONTROLLING PROCEDURE HOLDING UNIT
52
RINGTONE READING UNIT
RINGTONE STORING UNIT
27
IMAGE READING UNIT
IMAGE STORING UNIT
MOVING PICTURE READING UNIT
23
MOVING PICTURE STORING UNIT
TV TUNER
12
32
31
26
25
22
21
14
11
META INFORMATION EXTRACTING UNIT
53

FIG. 4

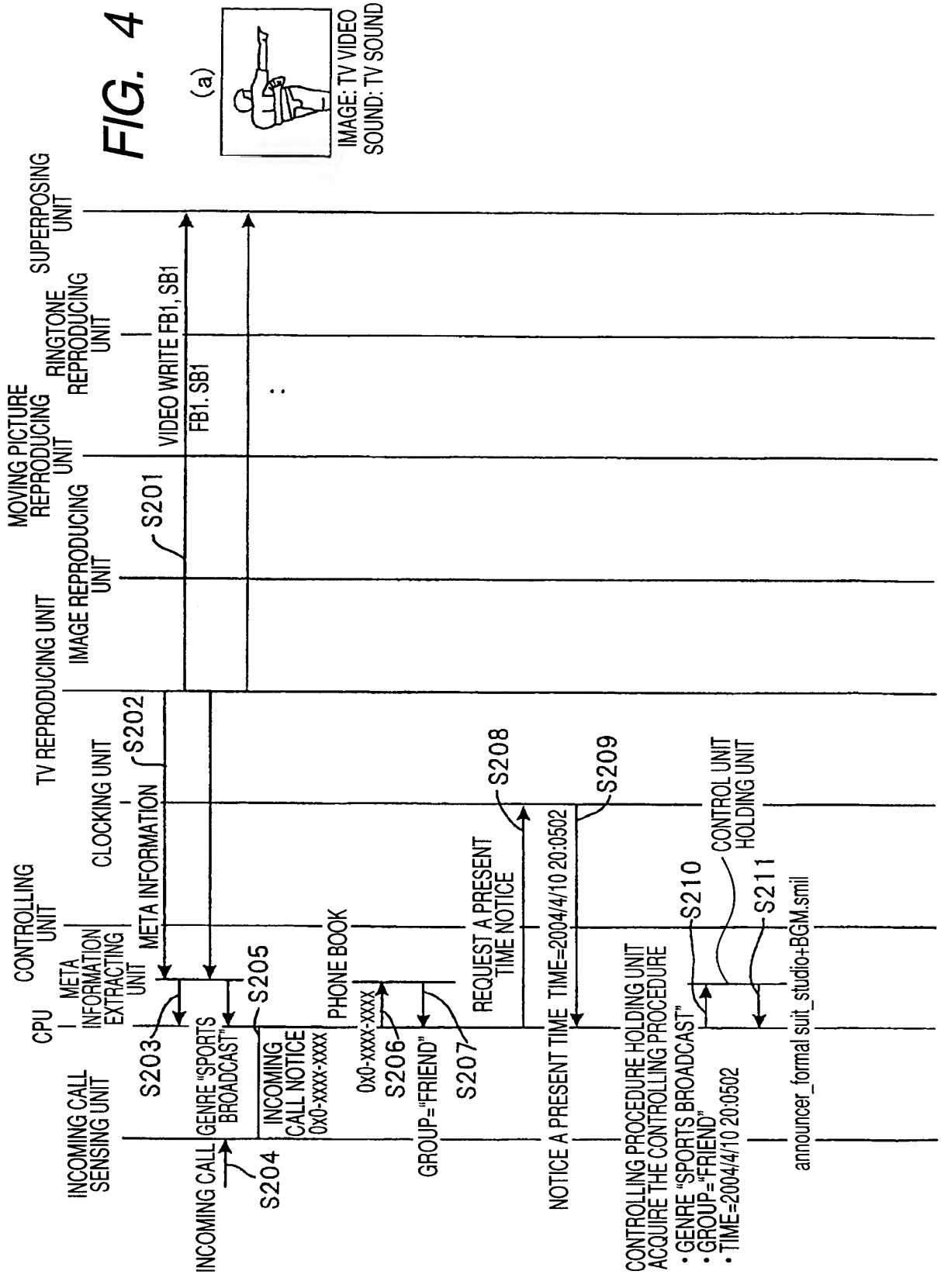

(a)
IMAGE: TV VIDEO
SOUND: TV SOUND
INCOMING CALL SENSING UNIT
CPU
CONTROLLING UNIT
META INFORMATION EXTRACTING UNIT
CLOCKING UNIT
TV REPRODUCING UNIT
IMAGE REPRODUCING UNIT
MOVING PICTURE REPRODUCING UNIT
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
META INFORMATION
S201
VIDEO WRITE FB1, SB1
FB1. SB1
S202
S203
INCOMING CALL
S204
GENRE "SPORTS BROADCAST"
S205
INCOMING CALL NOTICE
0x0-xxxx-xxxx
PHONE BOOK
0x0-xxxx-xxxx
S206
GROUP="FRIEND"
S207
REQUEST A PRESENT TIME NOTICE
S208
NOTICE A PRESENT TIME
TIME=2004/4/10 20:0502
S209
CONTROLLING PROCEDURE HOLDING UNIT ACQUIRE THE CONTROLLING PROCEDURE
• GENRE "SPORTS BROADCAST"
• GROUP="FRIEND"
• TIME=2004/4/10 20:0502
S210
CONTROL UNIT HOLDING UNIT
S211
announcer_formal suit_studio+BGM.smil

FIG. 5

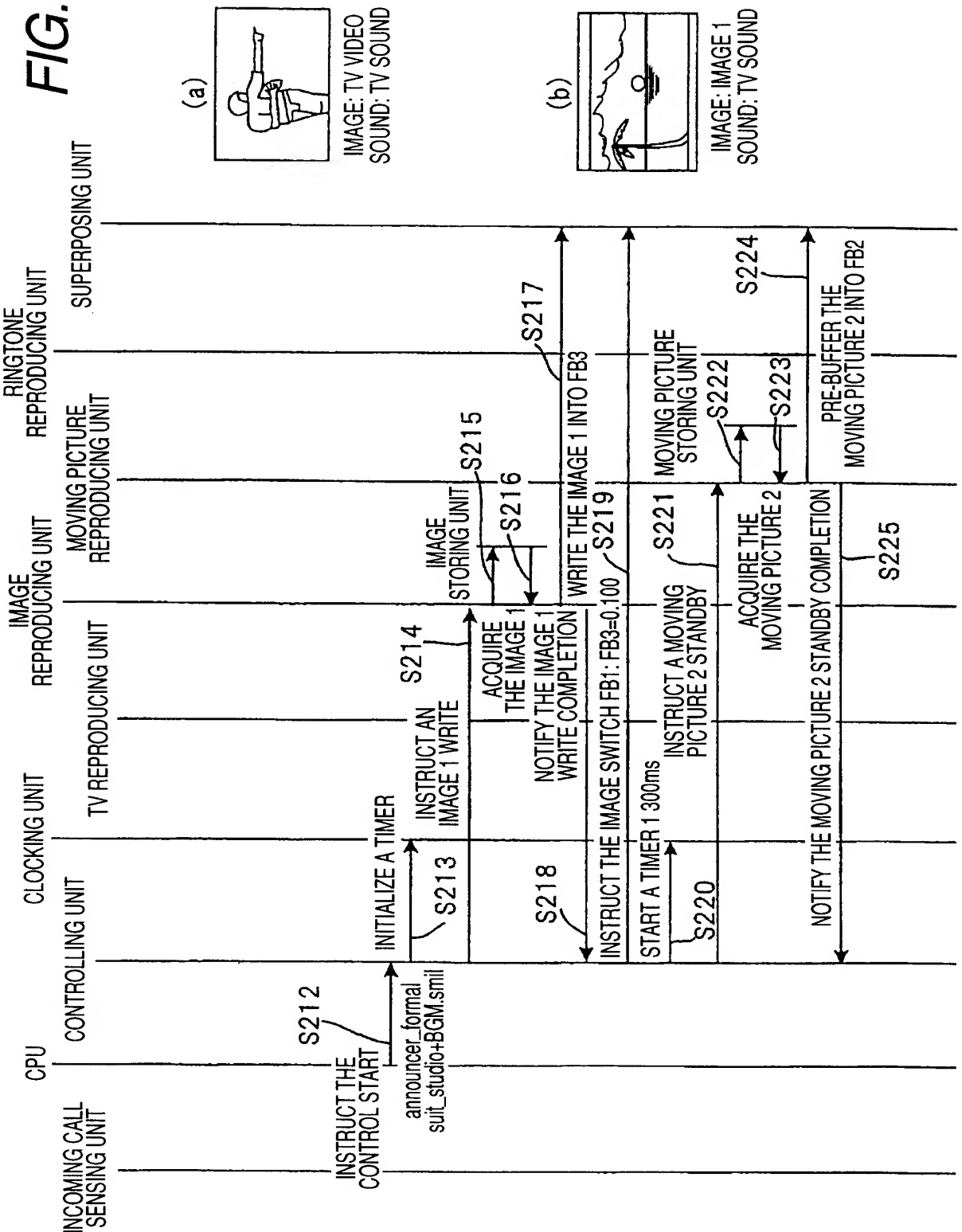

INCOMING CALL SENSING UNIT
CPU
CONTROLLING UNIT
CLOCKING UNIT
TV REPRODUCING UNIT
IMAGE REPRODUCING UNIT
MOVING PICTURE REPRODUCING UNIT
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
INSTRUCT THE CONTROL START
S212
announcer_formal suit_studio+BGM.smil
INITIALIZE A TIMER
S213
INSTRUCT AN IMAGE 1 WRITE
S214
ACQUIRE THE IMAGE 1
IMAGE STORING UNIT
S215
S216
NOTIFY THE IMAGE 1 WRITE COMPLETION
S217
WRITE THE IMAGE 1 INTO FB3
S218
INSTRUCT THE IMAGE SWITCH FB1: FB3=0.100
S219
START A TIMER 1 300ms
S220
INSTRUCT A MOVING PICTURE 2 STANDBY
S221
MOVING PICTURE STORING UNIT
S222
S223
S224
ACQUIRE THE MOVING PICTURE 2
PRE-BUFFER THE MOVING PICTURE 2 INTO FB2
NOTIFY THE MOVING PICTURE 2 STANDBY COMPLETION
S225
(a)
IMAGE: TV VIDEO
SOUND: TV SOUND
(b)
IMAGE: IMAGE 1
SOUND: TV SOUND

FIG. 6

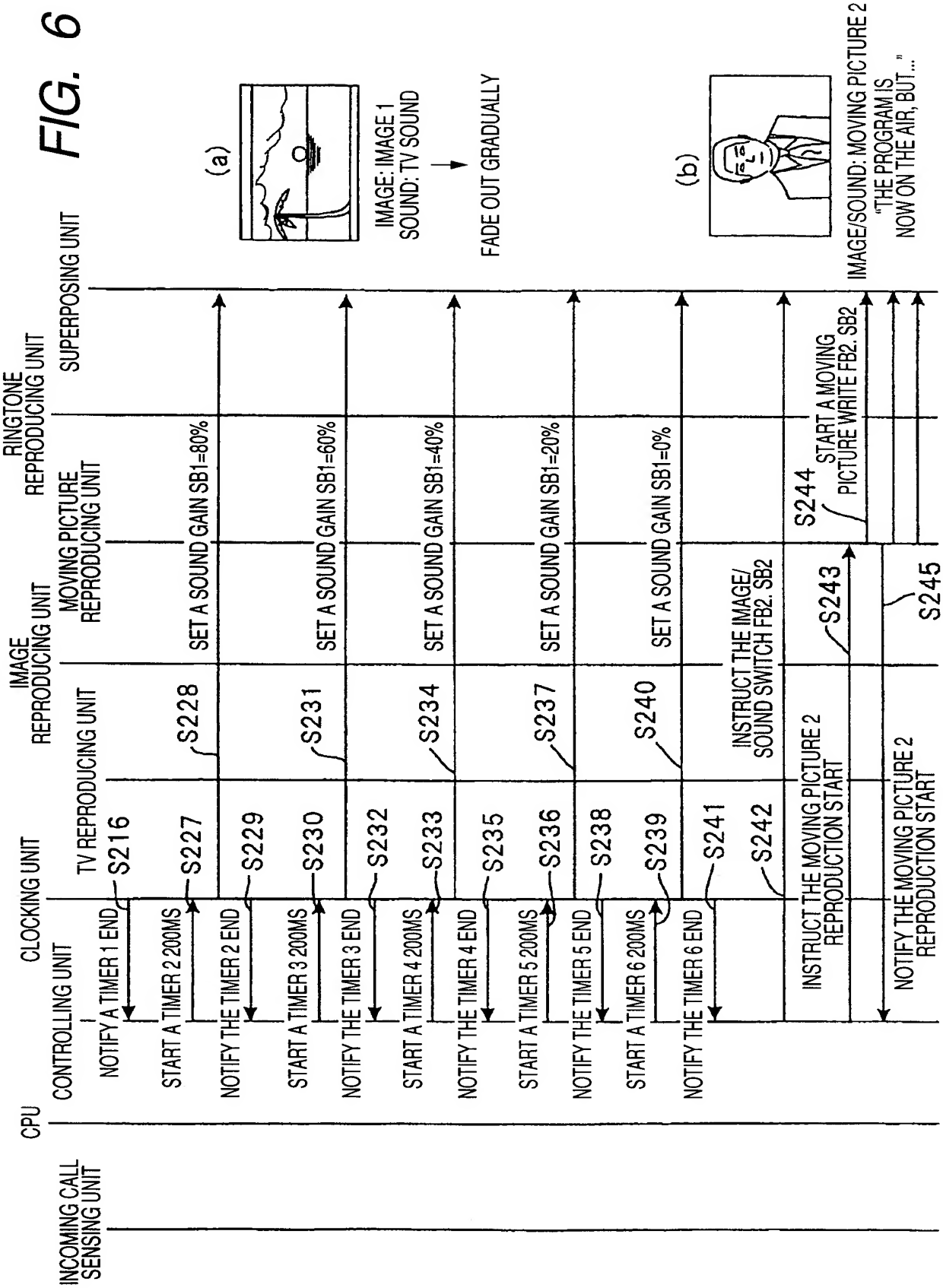

INCOMING CALL SENSING UNIT
CPU
CLOCKING UNIT
CONTROLLING UNIT
IMAGE REPRODUCING UNIT
TV REPRODUCING UNIT
MOVING PICTURE REPRODUCING UNIT
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
NOTIFY A TIMER 1 END
S216
START A TIMER 2 200MS
S227
S228
SET A SOUND GAIN SB1=80%
NOTIFY THE TIMER 2 END
S229
START A TIMER 3 200MS
S230
S231
SET A SOUND GAIN SB1=60%
NOTIFY THE TIMER 3 END
S232
START A TIMER 4 200MS
S233
S234
SET A SOUND GAIN SB1=40%
NOTIFY THE TIMER 4 END
S235
START A TIMER 5 200MS
S236
S237
SET A SOUND GAIN SB1=20%
NOTIFY THE TIMER 5 END
S238
START A TIMER 6 200MS
S239
S240
SET A SOUND GAIN SB1=0%
NOTIFY THE TIMER 6 END
S241
S242
INSTRUCT THE IMAGE/ SOUND SWITCH FB2. SB2
INSTRUCT THE MOVING PICTURE 2 REPRODUCTION START
S243
S244
START A MOVING PICTURE WRITE FB2. SB2
NOTIFY THE MOVING PICTURE 2 REPRODUCTION START
S245
(a)
IMAGE: IMAGE 1
SOUND: TV SOUND
FADE OUT GRADUALLY
(b)
IMAGE/SOUND: MOVING PICTURE 2
"THE PROGRAM IS NOW ON THE AIR, BUT..."

FIG. 7

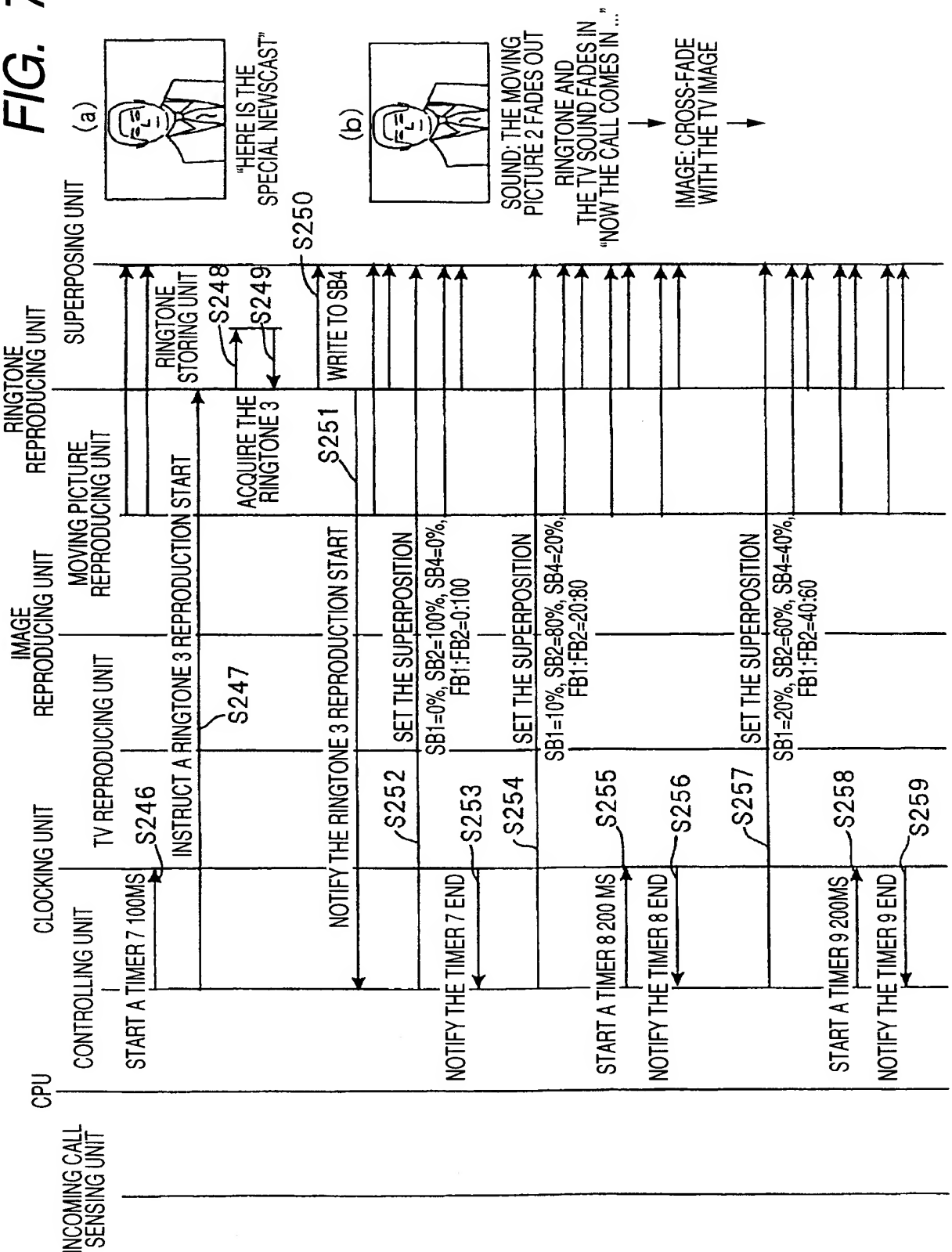

INCOMING CALL SENSING UNIT
CPU
CONTROLLING UNIT
CLOCKING UNIT
IMAGE REPRODUCING UNIT
MOVING PICTURE REPRODUCING UNIT
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
START A TIMER 7 100MS
S246
TV REPRODUCING UNIT
INSTRUCT A RINGTONE 3 REPRODUCTION START
S247
RINGTONE STORING UNIT
S248
S249
ACQUIRE THE RINGTONE 3
S250
WRITE TO SB4
S251
NOTIFY THE RINGTONE 3 REPRODUCTION START
S252
SET THE SUPERPOSITION
SB1=0%, SB2=100%, SB4=0%, FB1:FB2=0:100
NOTIFY THE TIMER 7 END
S253
S254
SET THE SUPERPOSITION
SB1=10%, SB2=80%, SB4=20%, FB1:FB2=20:80
START A TIMER 8 200 MS
S255
NOTIFY THE TIMER 8 END
S256
S257
SET THE SUPERPOSITION
SB1=20%, SB2=60%, SB4=40%, FB1:FB2=40:60
START A TIMER 9 200MS
S258
NOTIFY THE TIMER 9 END
S259
(a)
"HERE IS THE SPECIAL NEWSCAST"
(b)
SOUND: THE MOVING PICTURE 2 FADES OUT
RINGTONE AND THE TV SOUND FADES IN "NOW THE CALL COMES IN ..."
IMAGE: CROSS-FADE WITH THE TV IMAGE

FIG. 8

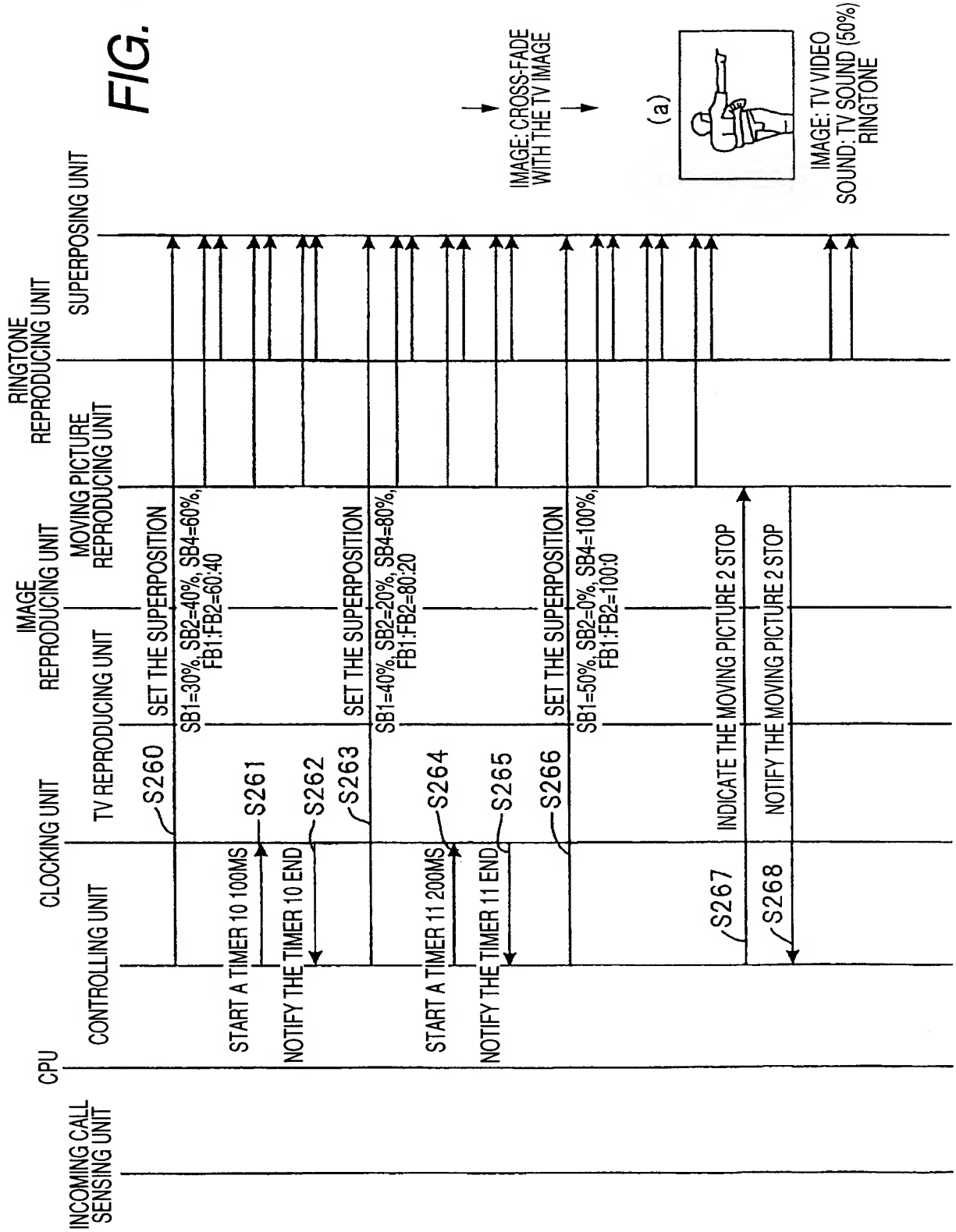

INCOMING CALL SENSING UNIT
CPU
CONTROLLING UNIT
CLOCKING UNIT
TV REPRODUCING UNIT
IMAGE REPRODUCING UNIT
MOVING PICTURE REPRODUCING UNIT
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
S260
SET THE SUPERPOSITION
SB1=30%, SB2=40%, SB4=60%, FB1:FB2=60:40
START A TIMER 10 100MS
S261
NOTIFY THE TIMER 10 END
S262
S263
SET THE SUPERPOSITION
SB1=40%, SB2=20%, SB4=80%, FB1:FB2=80:20
START A TIMER 11 200MS
S264
NOTIFY THE TIMER 11 END
S265
S266
SET THE SUPERPOSITION
SB1=50%, SB2=0%, SB4=100%, FB1:FB2=100:0
IMAGE: CROSS-FADE WITH THE TV IMAGE
(a)
S267
INDICATE THE MOVING PICTURE 2 STOP
S268
NOTIFY THE MOVING PICTURE 2 STOP
IMAGE: TV VIDEO
SOUND: TV SOUND (50%) RINGTONE

FIG. 9

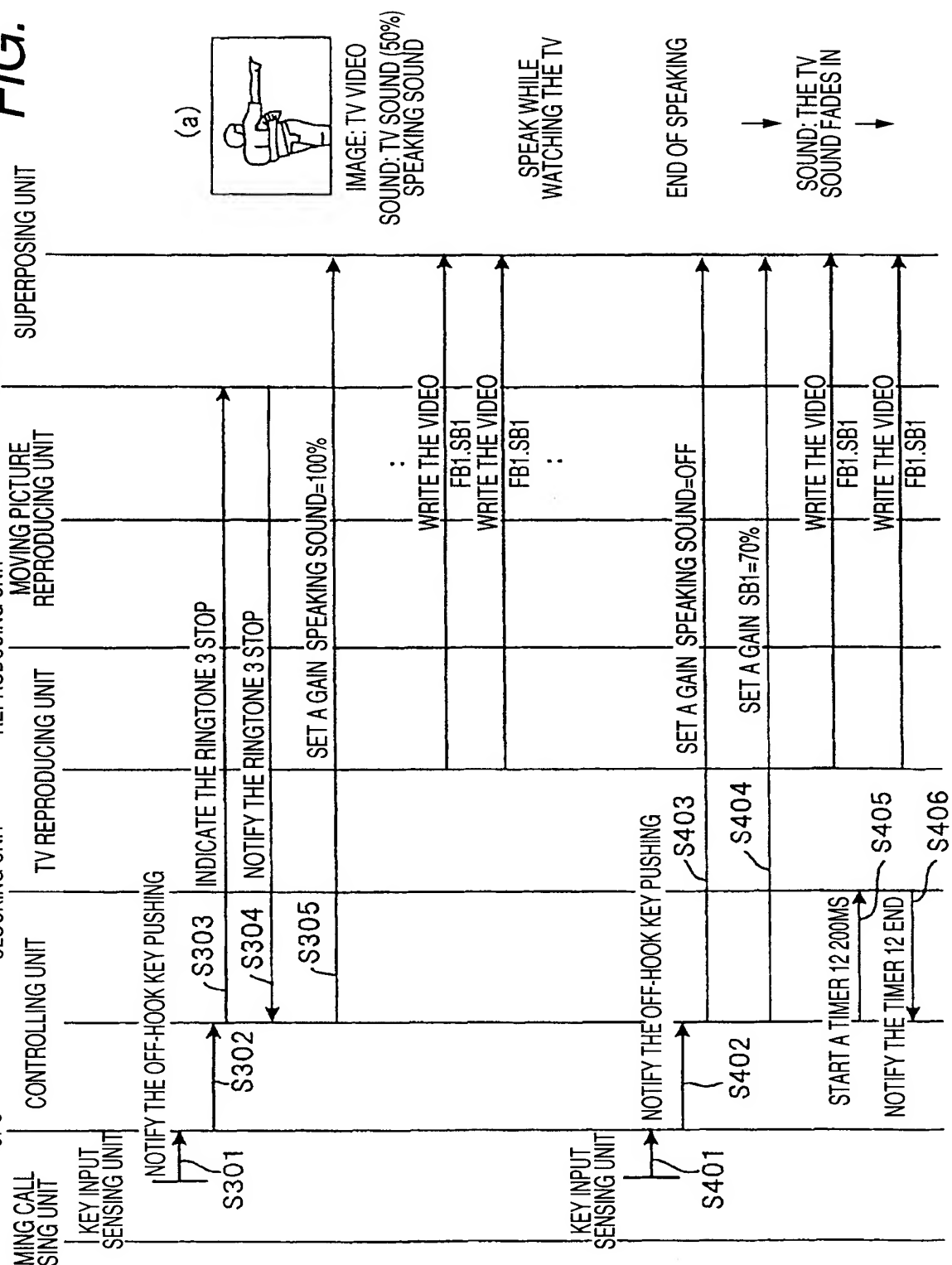

INCOMING CALL SENSING UNIT
KEY INPUT SENSING UNIT
CPU
CONTROLLING UNIT
CLOCKING UNIT
TV REPRODUCING UNIT
IMAGE REPRODUCING UNIT
MOVING PICTURE REPRODUCING UNIT
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
NOTIFY THE OFF-HOOK KEY PUSHING
S301
S302
S303
INDICATE THE RINGTONE 3 STOP
S304
NOTIFY THE RINGTONE 3 STOP
S305
SET A GAIN SPEAKING SOUND=100%
WRITE THE VIDEO
FB1.SB1
WRITE THE VIDEO
FB1.SB1
(a)
IMAGE: TV VIDEO
SOUND: TV SOUND (50%) SPEAKING SOUND
SPEAK WHILE WATCHING THE TV
KEY INPUT SENSING UNIT
S401
NOTIFY THE OFF-HOOK KEY PUSHING
S402
S403
SET A GAIN SPEAKING SOUND=OFF
S404
SET A GAIN SB1=70%
START A TIMER 12 200MS
S405
NOTIFY THE TIMER 12 END
S406
WRITE THE VIDEO
FB1.SB1
WRITE THE VIDEO
FB1.SB1
END OF SPEAKING
SOUND: THE TV SOUND FADES IN

FIG. 10

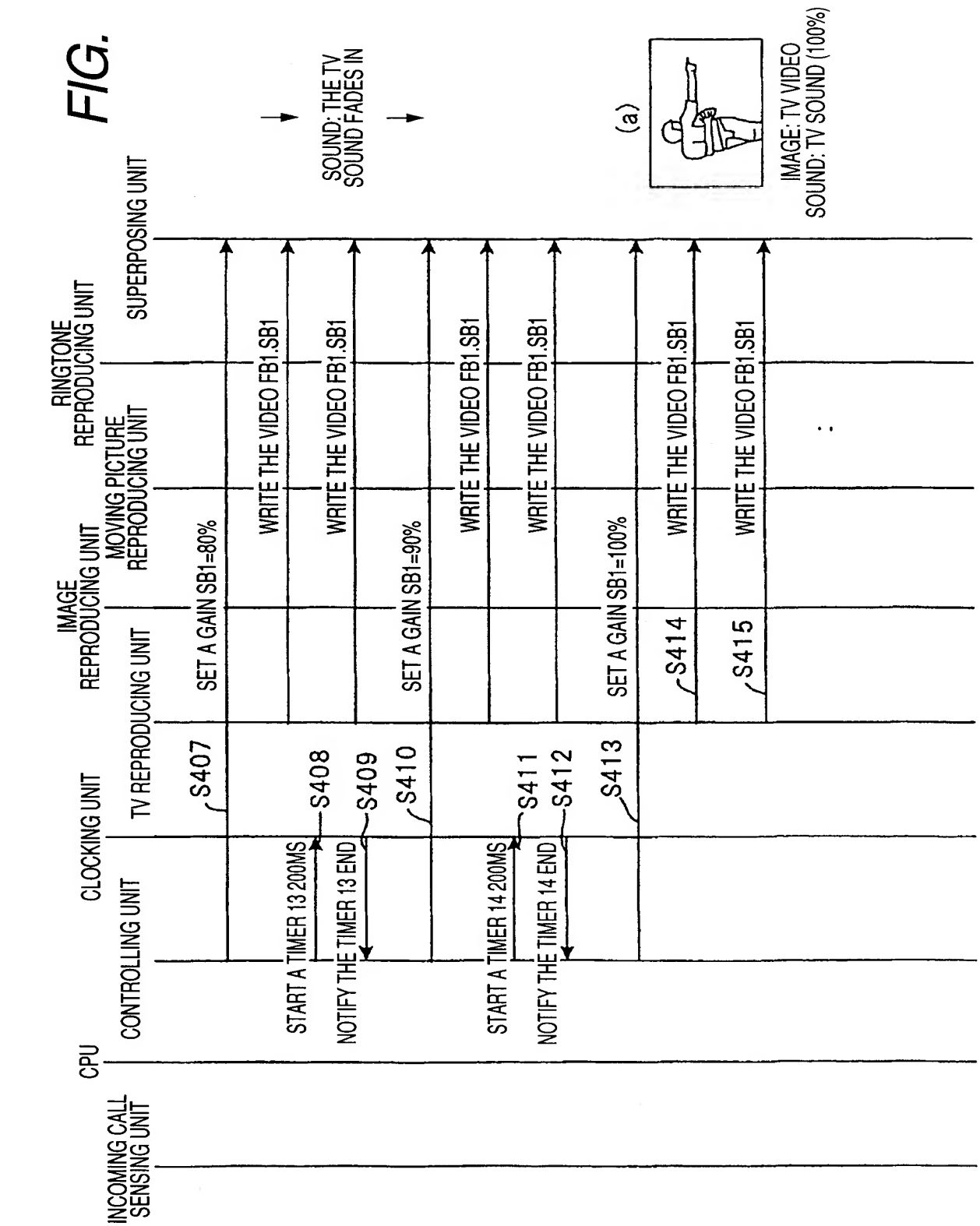

INCOMING CALL SENSING UNIT
CPU
CONTROLLING UNIT
CLOCKING UNIT
TV REPRODUCING UNIT
IMAGE REPRODUCING UNIT
SET A GAIN SB1=80%
MOVING PICTURE REPRODUCING UNIT
WRITE THE VIDEO FB1.SB1
RINGTONE REPRODUCING UNIT
SUPERPOSING UNIT
S407
START A TIMER 13 200MS
S408
NOTIFY THE TIMER 13 END
S409
SET A GAIN SB1=90%
S410
START A TIMER 14 200MS
S411
NOTIFY THE TIMER 14 END
S412
SET A GAIN SB1=100%
S413
S414
S415
SOUND: THE TV SOUND FADES IN
(a)
IMAGE: TV VIDEO
SOUND: TV SOUND (100%)

FIG. 11

CHARACTER DATA
(D-DEC OUTPUT)

```
<html>
<head>
<title> night game broadcast </title>
</head>
<boby>
<center>
<img src="sports.jpg"    alt="sports ">
</center>

</body>
</html>
```

FIG. 12

META DATA

```
<title>night game broadcast</title>
<genre>sports</genre>
```

FIG. 13

GENRE	CONTROL PROCEDURE TABLE NAME
music	script_table_music
drama	script_table_dorama
sports	script_table_sports
news	script_table_news
:	:

TABLE NAME=SCRIPT TABLE_SPORTS

SENDER GROUP	ARRIVAL PERIOD	CONTROLLING UNIT FILE NAME
FRIEND	7/1～8/30	SCRIPT 1
	9/1～6/30	SCRIPT 2
WORK	WHOLE PERIOD	SCRIPT 3
:	:	:

FIG. 14

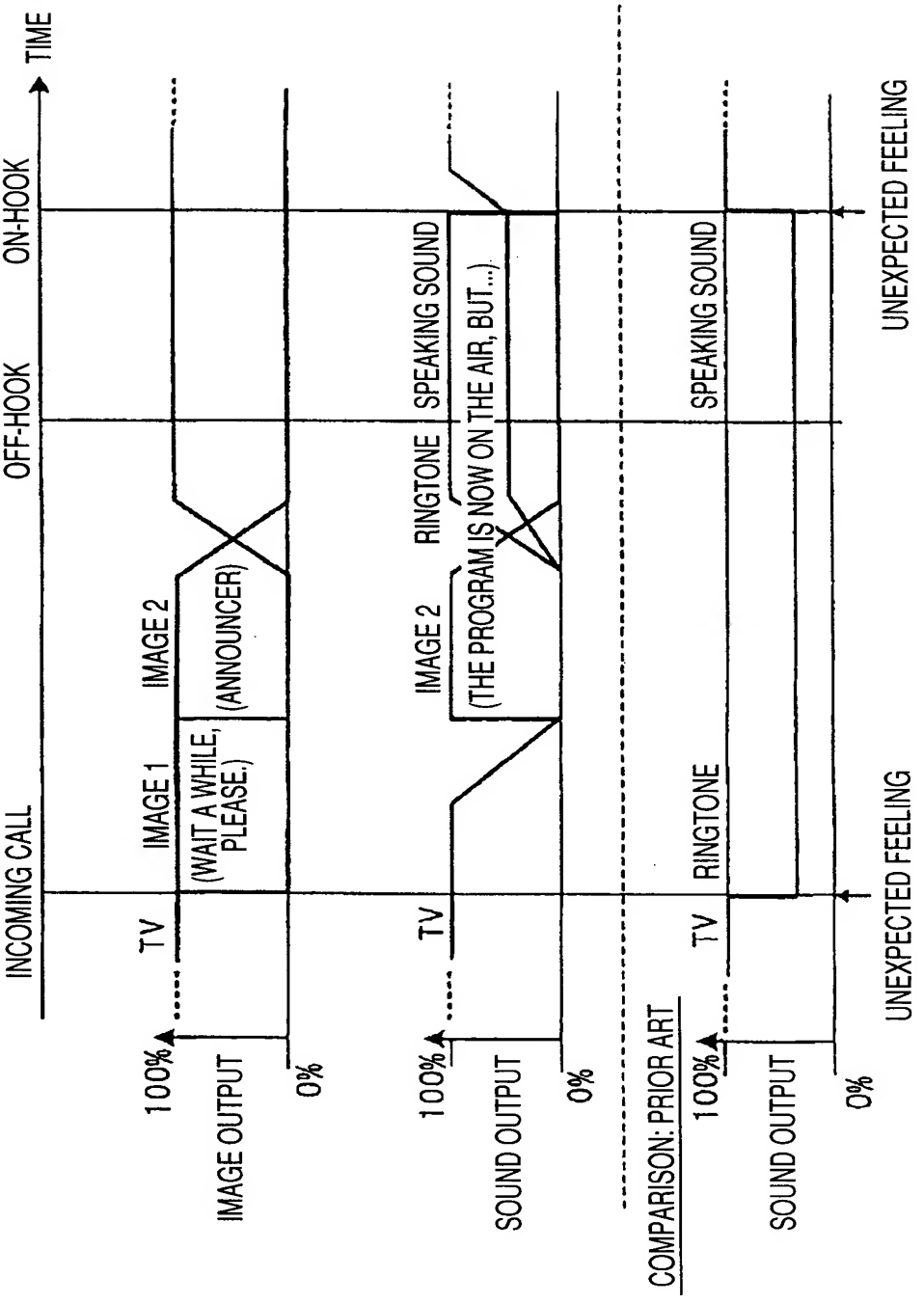

INCOMING CALL
OFF-HOOK
ON-HOOK
TIME
TV
IMAGE 1
(WAIT A WHILE, PLEASE.)
IMAGE 2
(ANNOUNCER)
100%
IMAGE OUTPUT
0%
TV
IMAGE 2
(THE PROGRAM IS NOW ON THE AIR, BUT...)
RINGTONE
SPEAKING SOUND
100%
SOUND OUTPUT
0%
UNEXPECTED FEELING
COMPARISON: PRIOR ART
TV
RINGTONE
SPEAKING SOUND
100%
SOUND OUTPUT
0%
UNEXPECTED FEELING

FIG. 15

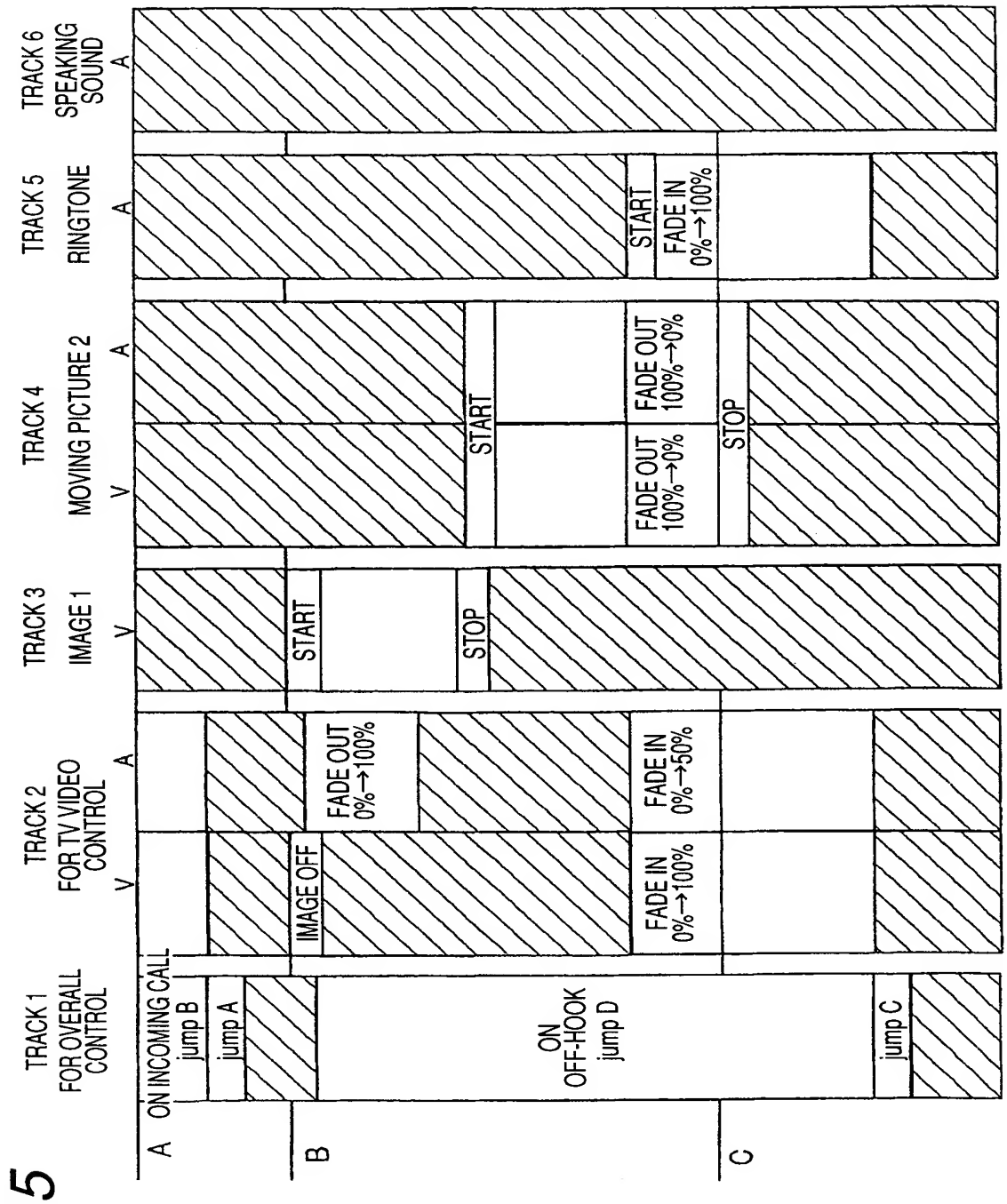

TRACK 1
FOR OVERALL CONTROL
TRACK 2
FOR TV VIDEO CONTROL
TRACK 3
IMAGE 1
TRACK 4
MOVING PICTURE 2
TRACK 5
RINGTONE
TRACK 6
SPEAKING SOUND
A
V
A
V
A
A
ON INCOMING CALL
jump B
jump A
IMAGE OFF
FADE OUT 0%→100%
START
STOP
START
FADE OUT 100%→0%
FADE IN 0%→100%
FADE OUT 100%→0%
FADE IN 0%→50%
START
FADE IN 0%→100%
STOP
ON OFF-HOOK
jump D
jump C
A
B
C

FIG. 16

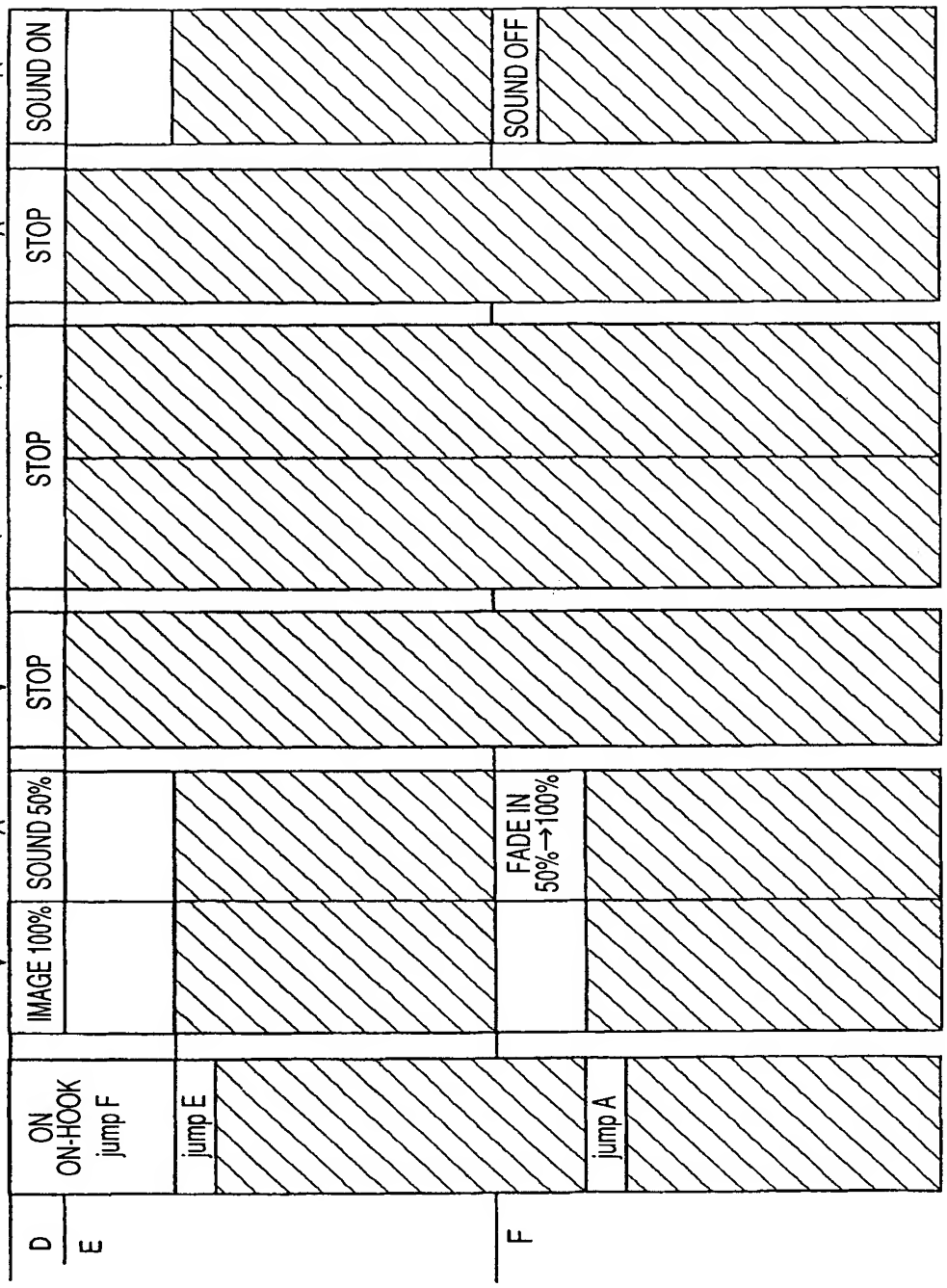

TRACK 1
FOR OVERALL CONTROL
TRACK 2
FOR TV VIDEO CONTROL
V
A
TRACK 3
IMAGE 1
V
TRACK 4
MOVING PICTURE 2
V
A
TRACK 5
RINGTONE
A
TRACK 6
SPEAKING SOUND
A
D
ON
ON-HOOK
jump F
IMAGE 100%
SOUND 50%
STOP
STOP
STOP
SOUND ON
E
jump E
F
FADE IN
50%→100%
SOUND OFF
jump A

FIG. 17

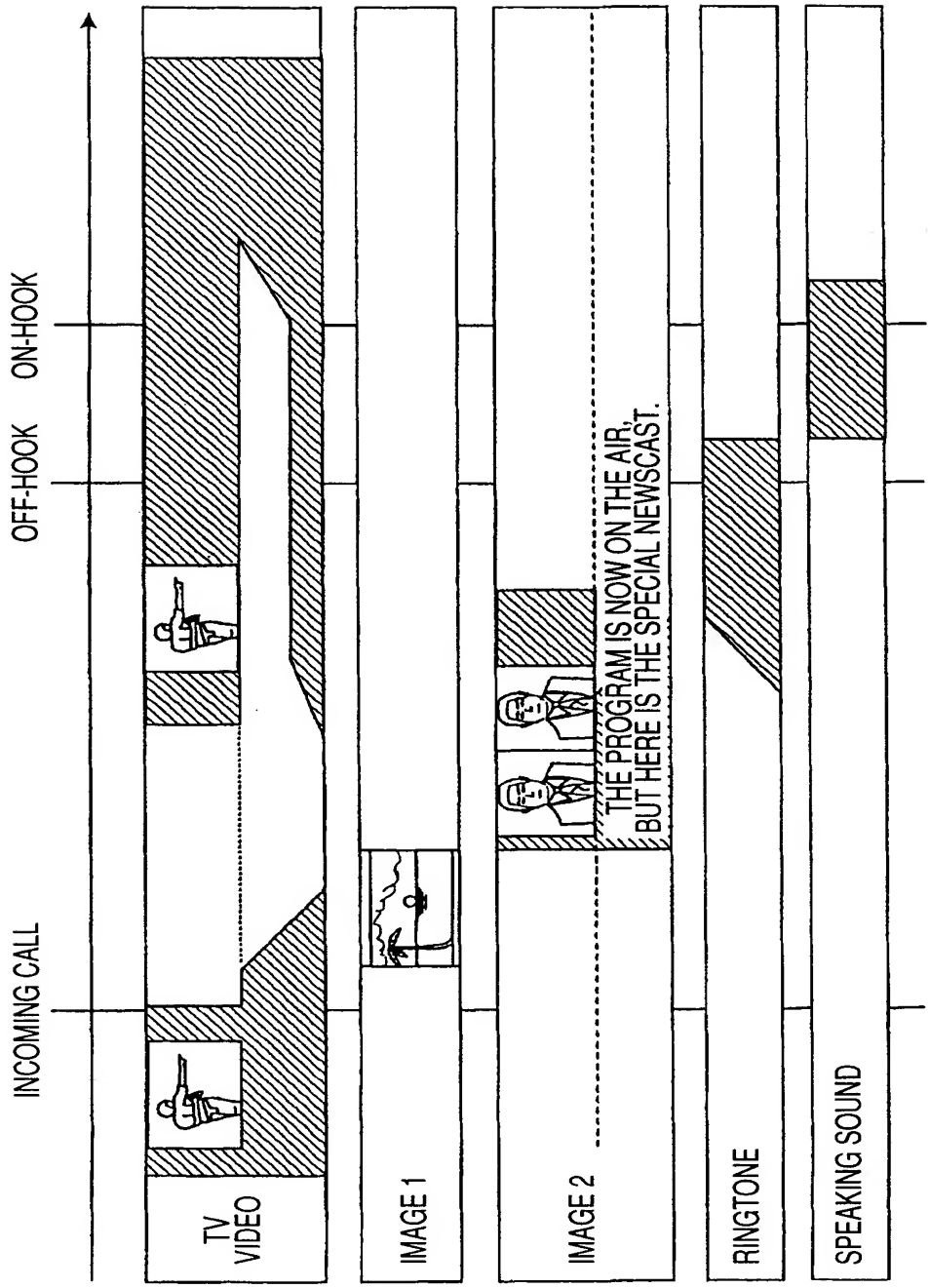
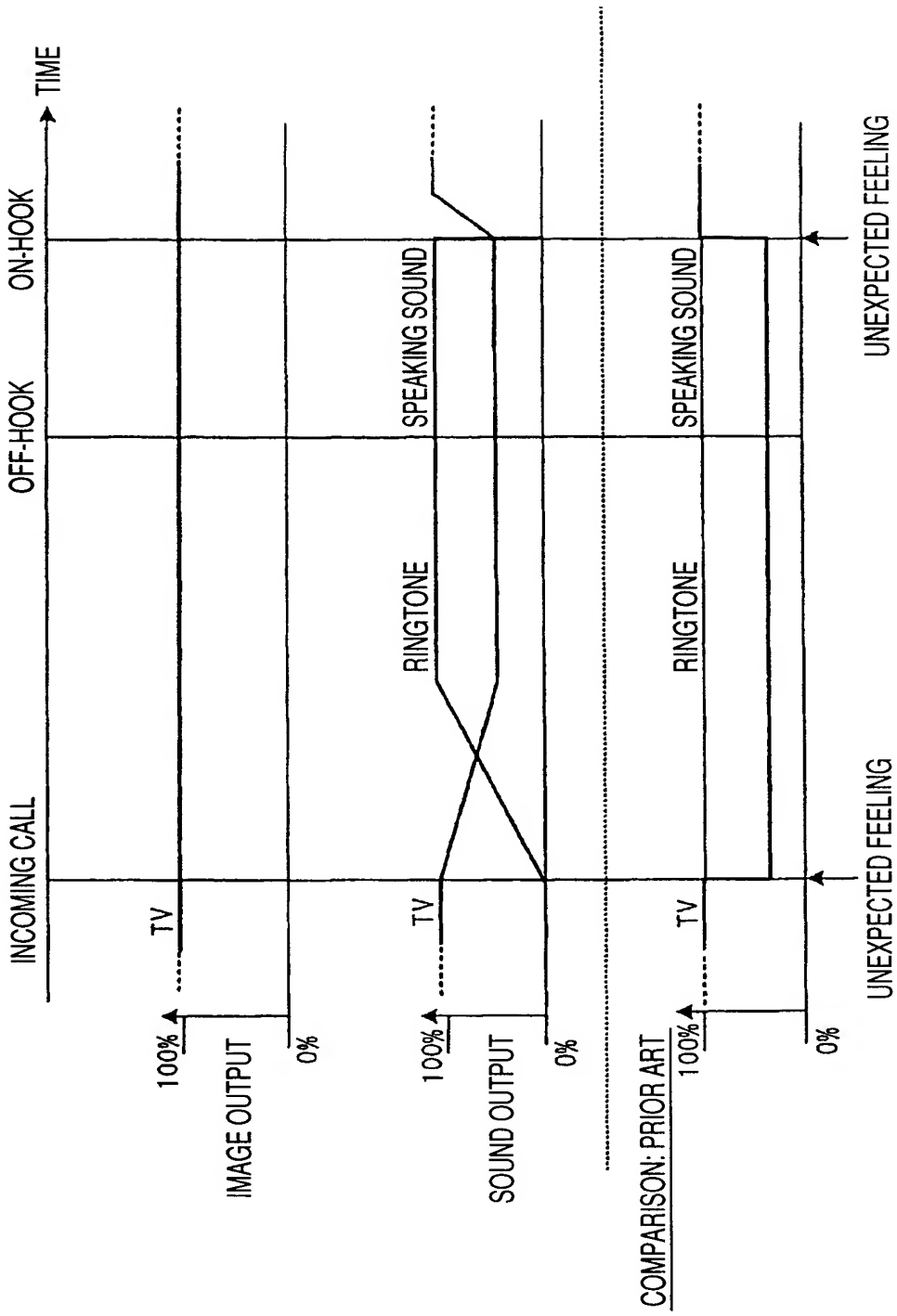

INCOMING CALL
OFF-HOOK
ON-HOOK
TV VIDEO
IMAGE 1
IMAGE 2
THE PROGRAM IS NOW ON THE AIR.
BUT HERE IS THE SPECIAL NEWSCAST.
RINGTONE
SPEAKING SOUND

FIG. 18


INCOMING CALL
OFF-HOOK
ON-HOOK
TIME
TV
100%
IMAGE OUTPUT
0%
RINGTONE
SPEAKING SOUND
SOUND OUTPUT
COMPARISON: PRIOR ART
UNEXPECTED FEELING
UNEXPECTED FEELING